FOH0338



**HOBART BROTHERS COMPANY**
HOBART SQUARE • TROY, OHIO 45373 U.S.A. • (513) 339-6011

June 14, 1971

Mr. G. A. Hall
Engineering Secretary
Ohio Water Pollution Control Board
P O Box 118
Columbus, Ohio 43216



Dear Mr. Hall: Subject: Request for Renewal of Permit No. 2499

The Hobart Brothers Company is requesting a renewal of their Permit No. 2499 for the discharge of effluents to Morgan Ditch and hydraulic ditch. These streams are located adjacent to our Westbrook facility in Troy, Ohio. This application for renewal describes the efforts that we have made during the past six months in meeting the requirements of the State.

The enclosed layout, drawing No. 425676, presents a complete plant layout of plant effluents, storm sewers, and sanitary sewer lines. This drawing illustrates the flow of effluents through the plant as of June 1, 1971. In addition, the drawings further illustrate the proposed changes to remove all effluents from the drainage ditches for release to the sanitary sewer system of the City of Troy.

This release to the sanitary sewer system is being coordinated with the City of Troy and their consultants. A letter documenting this coordination is presented as attached. Hobart Brothers Company will meet all requirements of the City of Troy and their consultants for the condition of the effluents for release to the sanitary sewer system.

When construction is completed for all of the in-house treatment systems, there will be no plant effluents released to either Morgan ditch or the hydraulic ditch. However, roof and surface runoff waters will still be released to the ditches during rainy periods.

The remainder of this write-up will address itself to the proposed minimizing of effluents generated, in-house treatment techniques, and the modifications that will be made to direct all effluents to the sanitary sewer system.

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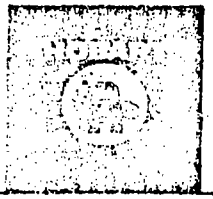



In submitting detailed information concerning the efforts of the Hobart Brothers Company during the past six months to meet the requirements of Doctor Arnold's letter of December 9, 1970 concerning Hobart Brothers Company's Water Pollution Control permit No. 2499, I refer specifically to Point 1 of Doctor Arnold's December 9, 1970 letter and a document by the Ohio Department of Health entitled "Instructions Regarding Submission of Detailed Plans for Approval of Industrial Waste Water Treatment Facilities."

As mentioned above, Hobart drawing 425676 presents a complete plant layout of our Westbrook facility. The layout clearly indicates the three major areas within our Westbrook plant where pollutants are generated. First, I would like to call your attention to Hobart drawing 425678 which contains detailed information concerning Hobart steel rod cleaning and coppering lines. The process outlined by drawing 425678 and the description to follow illustrates a major breakthrough in the minimizing of pollutants generated through the process of removing mill scale from steel rod. The procedure incorporated in the Hobart manufacturing facility prior to May 1, 1971 called for the use of hot sulfuric acid for the removal of mill scale. This process consumed great quantities of sulfuric acid, and in turn generated tremendous quantities of acids which were disposed of by dumping directly into the hydraulic ditch adjacent to the Westbrook facility. As of May 1, 1971, the Hobart Brothers Company has discontinued the use of the old acid dipping system and incorporated its entire production into the new facility as illustrated on drawing 425678. The new system incorporates the use of mechanically descaling the rod. Through a unique development by Hobart Brothers Company, the mechanical descaling process removed approximately 96 to 97% of all mill scale. After removal of mill scale, the rod is carried through acid etching tanks, rinse tanks, lime coating tanks, lime drying ovens, and collector assemblies by use of continuous conveyor chains. The new process of mechanically removing mill scale has resulted in a reduction of from 20 pounds sulfuric acid per ton to one pound hydrochloric acid per 8 tons of wire processed. This reduction in turn greatly reduces the amount of acid which Hobart must dispose of.

The processing line LCL-2 not only incorporates mechanical descaling and acid etching, but also includes a copper sulfate tank for in-line copper plating of mill rod.

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At the present time, the rinse tanks on LCL-1 and LCL-2 lines are connected to a catch basin which in turn discharges directly into the storm sewer. It is proposed that a 5000-gallon holding tanks be constructed as shown on drawing 425678 for the purpose of recirculating the rinse water. The recirculation of the rinse water will drastically reduce the amount of rinse water used. It is proposed that the recirculating tank have a pH control which will maintain a minimum pH of 6. This will be accomplished by spilling over into the sanitary sewers of the City of Troy approximately 7 gallons per minute of rinse water from the recirculating system. The analysis of the rinse water is attached - see Bowser-Morner Laboratory analysis, sample No. 4.

It should also be noted that the 2% hydrated lime used in coating of the rod prior to it being dried and collected is pumped into a sludge truck and hauled to a landfill. As shown on drawing 425678, the lime tanks are connected into the effluent drain line. The reason for this is to facilitate cleaning of the lime tanks after the lime has been pumped to the sludge truck.

The exact treatment incorporated by Hobart Brothers of the effluent shown being discharged into drain catch basin #1 on drawing 425678 will be covered in detail at a later point in this write-up.

The second area of pollutants generated is covered by Hobart detail drawing 425675. Drawing 425675 covers Hobart-Vaughn Loopro annealing, acid etching, and copper coating continuous process line. The Loopro line incorporates drawing of 7/32 rod, annealing at 3/32, acid etching, and copper plating. The drawing attached illustrates only the areas in which pollutants are generated. As indicated on the drawing, the #1 tank contains approximately 600 gallons of 20% by volume HCL. This tank is operated at ambient temperature and is used for etching the steel wire prior to copper sulfate plating. At the present time, the acid tank as well as the two copper tanks are connected into the effluent treatment facility. The rinse water tanks are also connected into the effluent treatment facility. As of this date, all effluents discharged through the treatment facility are being subjected to ammonia neutralization and allowed to settle in the three settling tanks shown in detail on Hobart drawing 425666.

It is proposed that the rinse water be collected in a 2500-gallon holding

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tank and recirculated, similar to the rinse water shown in Hobart drawing 425678. It is anticipated that approximately 4 gallons per minute will be discharged into the treatment facility and approximately 35 gallons per minute will be recirculated through the rinse system. In order to control the pH, it is proposed that an automatic pH monitoring system be set up so as to maintain a pH of not less than 6.5.

The third portion of our manufacturing facility where pollutants are generated centers around the manufacture of our stick electrodes. This manufacturning area is located in the southeast portion of our Westbrook facility. This portion of our manufacturing facility generates a great deal of suspended solids material which must be removed. An analysis of the materials generated in this area is attached, see Bowser-Morner Laboratory analysis - sample No. 3. At the present time, referring to Hobart drawing 425676, it will be noted that Hobart has provided a number of points in the system where solids are allowed to settle. It should also be noted, that at the present time Hobart is discharging these materials into an earthen settling pit located just south of the main effluent settling basins.

Hobart has engaged Systems Technology Corporation of Dayton, Ohio, to study the solids problem, in this specific area. It is hoped that a treatment system can be worked out whereby the solids would be removed and the water recirculated. At this time, it is anticipated that if a certain amount of rinse water from this manufacturing area is to be discharged, it will meet the City of Troy's requirements for discharge into the sanitary sewer system. As soon as Hobart has received specific recommendations from Systems Technology, we will submit to the Ohio Department of Health plans for treatment of the waste from this area so as to make it acceptable to the City of Troy's sanitary sewer system and the State of Ohio.

Hobart drawing 425666 illustrates in detail the major Hobart effluent treatment facility. This facility incorporates a batch type mix and neutralization structure and a series of three large settling basins. The effluent is treated by the use of ammonia and is controlled by an automatic pH meter supplied by Verkamp Ammonia Company. The materials are mechanically and air agitated as they are being neutralized by the ammonia. The automatic pH control device continuously monitors the pH level of all effluents treated in the facility and a permanent record

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is kept on a continuous monitoring basis. The ammonia treatment is so arranged that instantaneous neutralization takes place as the materials flow into the facility. Two pumps are provided for pumping the treated effluents from the treatment house to the settling tanks. The main pump is rated at 6 gallons per minute and runs intermittently. A second pump is provided, set up so as to come on if the first pump fails or is overloaded. The three settling tanks are located approximately 240 feet from the treatment house and are set up with adjustable weirs so as to control the settling times in each of the tanks. The third tank is set up with two valves for precise metering into the sanitary sewer of the City of Troy. The valve designated #1 is set up to pass 3.1 gallons per minute. The second valve is arranged to pass approximately 2 gallons per minute. By arranging the valving in this way, it allows for the level in the third settling tank to rise approximately 3 feet in the tank. However, over the weekends when there is no flow into the treatment facility, the #2 valve will allow the No. 3 tank to discharge down to a level of approximately 6 inches. In this way, an almost continuous flow into the sanitary sewer system over a 24-hour period, 7 days a week, will be assured.

At the present time, Hobart is discharging into the hydraulic ditch adjacent to the third settling tank. This outfall is designated on Hobart drawing 425676 as outfall 5A. An analysis of this discharge into the hydraulic ditch is attached - Bowser-Morner Test Laboratory sample No. 2.

As noted on drawing 425676, there are three outfalls designated Nos. 5A, 5B and 8, where Hobart is now discharging liquids not conforming with the Ohio Water Pollution Control Board standards. The approximate flow rates and analyses of the materials now being discharged at the above noted outfalls are summarized in the Bowser-Morner Test Laboratory report dated June 9, 1971. As indicated, it is proposed by the Hobart Brothers Company to eliminate all discharge into the Morgan ditch and hydraulic ditch by making the effluents acceptable to the sanitary sewer system of the City of Troy. It is anticipated that this entire program will be completed by October 1, 1971.

It is hoped that the enclosed data will provide you with the infomation

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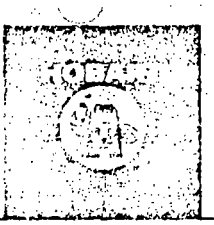



necessary to renew Hobart Brothers' permit. If you have further questions at any time, please feel free to contact the undersigned.

Yours very truly,

Edward A Hobart

E. A. Hobart - President
HOBART BROTHERS COMPANY

Enc. drawings
test reports
letter

copy to: Mr. Mel Eiffert
Mr. Charles Forsthoff
Mr. Marlen Reber

(Do Not Write In This Space)

Application No. _____

Date Received _____

(Do Not Write In This Space)

Permit No. _____

Date of Board Action _____

# WATER POLLUTION CONTROL BOARD

DEPARTMENT OF HEALTH
STATE OF OHIO

## RENEWAL APPLICATION FOR PERMIT TO DISCHARGE SEWAGE, INDUSTRIAL WASTES, OR OTHER WASTES INTO WATERS OF THE STATE

*Please read carefully instructions on reverse side of this application before filling out.*

1. Name Hobart Brothers Company
2. Location Trade Square East, Troy, Ohio
3. Type of Establishment (If not a political subdivision) Industrial Manufacturing Plant
4. Type of Discharge Industrial Wastes
5. Body of Water Receiving Discharge Morgan Ditch
   (a) Next larger receiving tributary Great Miami River
6. Is Discharge Treated? --- Yes _____ No X
7. Attach supplemental information on compliance with renewal conditions stated in letter accompanying previous permit (No. 2499).

Any supplemental information submitted in connection with this application will be treated as confidential by the Board. Submission of this application does not constitute a waiver by the applicant of any rights or exemptions provided by law.

In accordance with the provisions of the Water Pollution Control Act, Sections 6111.01 to 6111.08 Revised Code of Ohio, and with the rules and regulations adopted by the Water Pollution Control Board in pursuance thereto, application hereby is made for a permit to discharge into the waters of the state sewage, industrial wastes, or other wastes, as described above, and in supplemental information hereto attached, all of which is made a part of this application.

Signature of authorized official Edward A Hobart

Title President

Post Office Address Hobart Square
Troy, Ohio 45373

### VERIFICATION

_____, being first duly sworn, says that he is the officer or person duly authorized to execute the foregoing application, and that the statements made and answers given therein, written or printed, are true as he verily believes.

Signature of Applicant _____

Sworn to an subscribed in my presence this _____ day of _____, 19___, at _____, County of _____ And State of _____.

Signature of Officer _____

Official Title _____

5672.34